



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.



Ground Vehicle Survivability Mr. Steve Knott April 15, 2008

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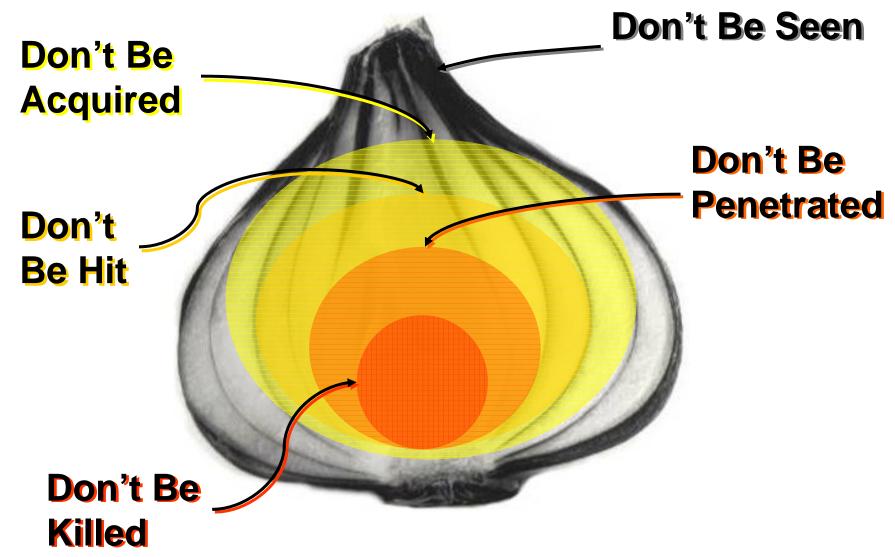
Report Documentation Page

Form Approved OMB No. 0704-0188



The Integrated Survivability "Onion"

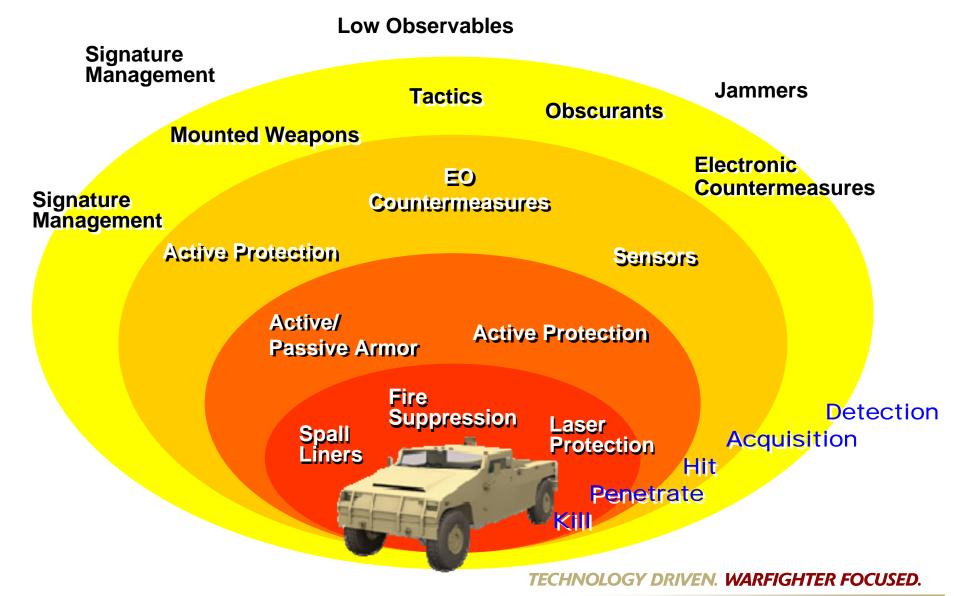






Research Focus Areas







Our Mission



Design for Survivability



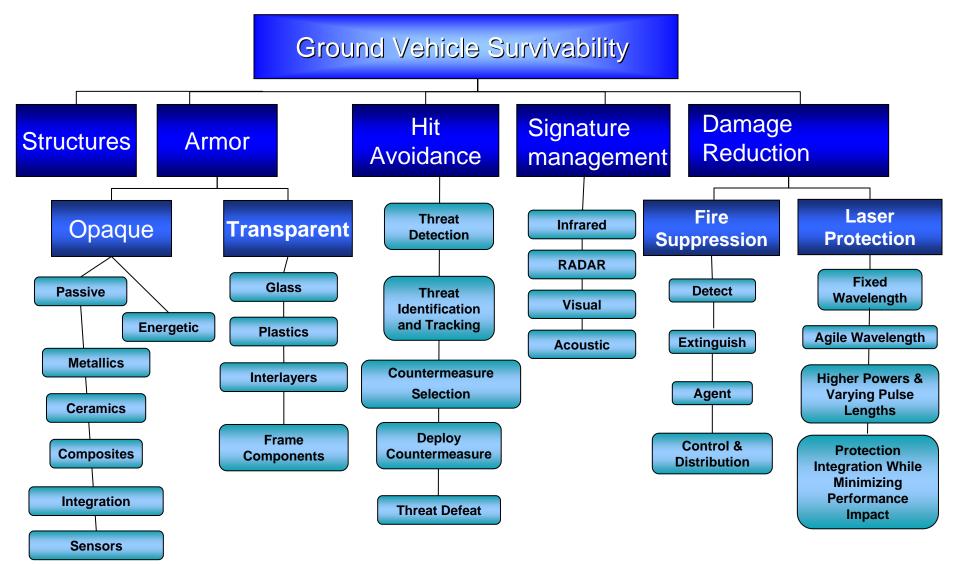
It's about balancing integration, mission, threat & technology

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Research Focus Areas Taxonomy





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Survivability - Technology Research Gaps





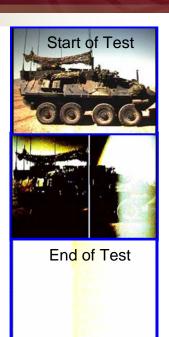


Multifunctional signature materials (visual, thermal RF, acoustic)

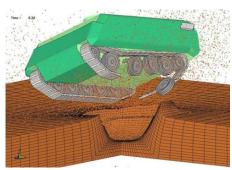


Predictive M&S - visual detection model

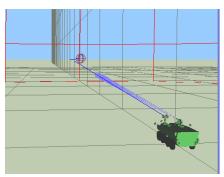
External fire extinguishing systems and agents



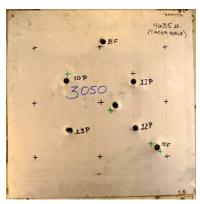
Mechanisms that switch high to very low optical transmission in a fraction of a nanosecond, and operate at all visible and near IR wavelengths.



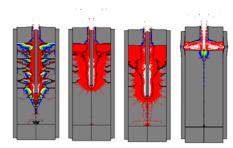
Predictive analysis of blast events - structures & crew



Predictive analysis for Active **Protection systems**



Lightweight multiple-hit armor



M&S for high velocity impact on ceramic/composites





Developing countermeasures to defeat fullspectrum threat munitions

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TARDEC Success Stories



- Armor panel manufacturing
- Resin/binder analysis
- Vehicle structural beam construction
- Structural beam testing (environmental / durability)
- Armor ballistic testing
- Active protection system, systems engineering
- Active protection system event modeling
- Vehicle fuel tank research
- Ceramic transparent armor research
- Blast mitigation research







